

Subject: INFORMATION: Rapid Decompression  
into Normally Unpressurized Areas

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From: Manager, Aircraft Certification Division, ANM-100

Reply to  
Attn. of:

To: Managers, Aircraft Certification Division,  
ACE-100, ANE-100, ASW-100  
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It has become evident by service experience that rapid decompression into normally unpressurized areas of an airplane can result in secondary damage to critical structure.

In order to determine that no unsafe features exist (reference FAR 21.21(b)(2)), this issue should be raised on all transport type certification programs now in progress and/or any new transport type certification programs. A special assessment of critical airplane structure in areas not normally subjected to pressurization loads should be requested. Issue papers should be used to document the procedures.

For this assessment, the rapid decompression events should employ the opening sizes specified by § 25.365 at any location in the pressurized cabin that could open into unpressurized compartments. The areas to be evaluated should include, but may not be limited to: fuselage aft of the rear pressure bulkhead, vertical fin and horizontal stabilizer, main and nose landing gear bays, center wing box and wing, and the radome forward of the pressure bulkhead.

The assessment should demonstrate that any structure whose failure could interfere with continued safe flight and landing would not fail when subjected to the pressure loads resulting from a rapid decompression into a normally unpressurized area.

We have initiated a rule-making project which will provide specific new Part 25 requirements in this area.

Signed by Darrell M Pederson  
For  
Leroy A. Keith